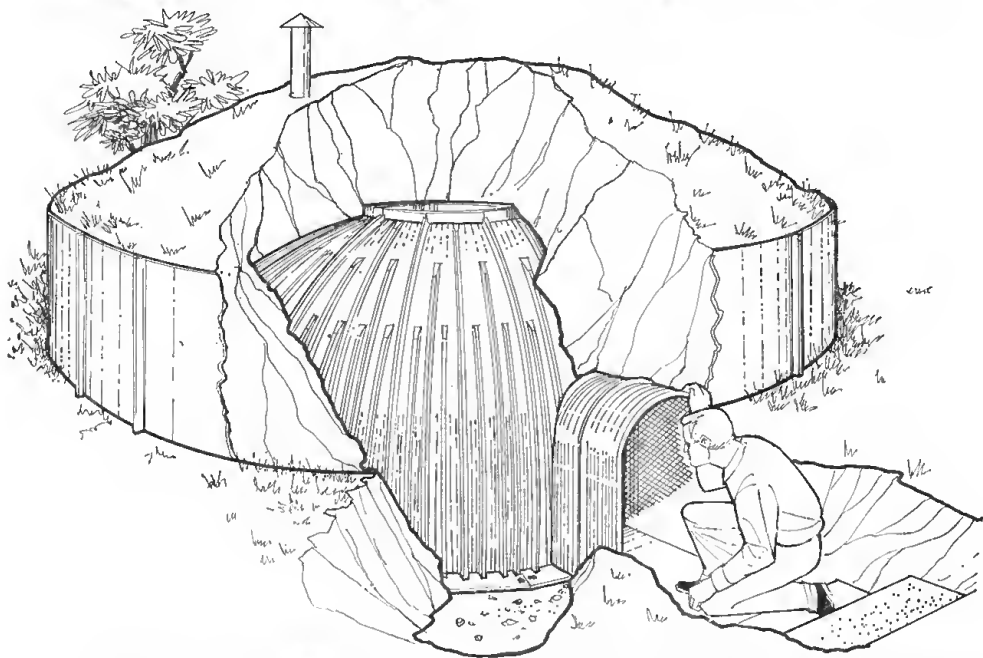




Outside Semimounded Steel Igloo Shelter



GENERAL INFORMATION

This shelter is designed to provide low-cost protection from the effects of radioactive fallout. Its principal advantages are that it provides fallout and limited blast protection and is suitable for either indoor or outdoor installation, and is easily assembled.

TECHNICAL SUMMARY

Space and Occupancy.—The shelter type detailed in this design has about 80 square feet of area including the entrance space. The interior has about 260 cubic feet and will house six persons.

Availability and Cost of Materials.—This shelter is of the prefabricated type and is available at department stores, building supply outlets, and mail-order firms. Cost is about \$175.

Fallout Protection Factor.—The protection factor should be about 500 with the prescribed thickness of covering and proper shielding of the entranceway.

Blast Protection.—This shelter could be expected to withstand a limited blast overpressure of 5 pounds per square inch.

Ventilation.—Ventilation is provided by a 3-inch intake pipe to which should be attached a hand operated blower. The air is vented through the airspace left in the entranceway.

Construction Time.—The igloo steel shell requires 4 man-hours to assemble. Excavating and covering time should take 24 man-hours.

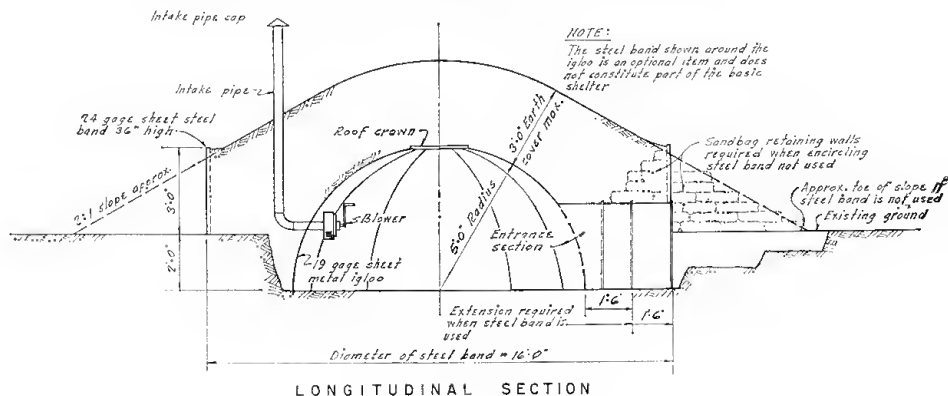
Structural Life Expectancy.—The igloo, when coated with mastic, has a life expectancy of at least 10 years.

CONSTRUCTION SEQUENCE*

1. Select well-drained site. The total area required, including the mounding, will be approximately 15' x 20'.
2. Use stakes to mark the area, and excavate. The hole required for the main shell is 5' x 12' x 2' deep, and the entranceway requires an additional 2½' x 2' x 6'.
3. Line hole with plastic film wrap.
4. Bolt one wall panel to the roof crown.
5. Bolt the next wall panel to the roof crown 180° from the first wall panel.

6. The third wall panel should be bolted to the crown and to a mating section. Repeat this step until all panels are bolted to mating panels and to the roof crown.
7. To complete the shelter, bolt the crawl entrance to the flanged lip on the entrance panel.
8. Cut 3"-diameter hole in wall opposite entrance. Mount ventpipe.
9. For outdoor installations, mound sand, earth, or bags of sand over the igloo shell to a covering height of 2 feet.
10. As an alternate installation in a basement, mound loose sand or sandbags to a covering height of at least 18 inches over the igloo shell.

*This is a generalized construction sequence for a prefabricated igloo shelter. Detailed instructions are provided with the construction kit.



BILL OF MATERIALS

Item	Quantity
Roof crown-----	1.
Wall panels-----	11.
Wall panel, with entrance opening-----	1.
Entrance, crawlway and door-----	1.
Sand or soil for cover-----	15 tons.
6 mil. polyethylene film (20' wide)-----	30 feet.
Mastic -----	6 gallons
Ventpipe (3" diameter) with ventpipe cap-----	6 feet.
Hand-operated blower (20 cubic feet per minute)-----	1.
Plyscreen 7" x 7" for ventpipe-----	1.
(Nuts, bolts, washers—as required.)	
Sandbags (to hold 15 to 20 pounds each) for entrance and retaining walls.	50.
Sandbags (to hold 75 to 100 pounds each)-----	30.